# CSU provides Fort Carson water quality consumer confidence report for 2004

*(Editor's note: Information provided by Colorado Springs Utilities and Fort Carson*

Fort Carson is a consecutive system from Colorado Springs Utilities. Fort Carson water comes from the Colorado Springs water system and is currently provided from the Fountain Valley Authority. Colorado Springs does the major portion of the compliance monitoring for this drinking water and the Colorado Springs Utilities monitoring information is included with this report. Fort Carson does 360 analyses per year (30 per month) for total coliform bacteria, 12 analyses per year (three per quarter) for total trihalomethanes, and 30 analyses per year for lead and copper in the distribution system. The data is summarized below:

**The table shows the results of Fort Carson's monitoring for the period of January 1 to December 31, 2003 unless otherwise noted:**

**Microbiological Contaminants**

| Contaminant | MCL | MCLG | CCR Unit | Level Detecte | Violation Yes or No | Sample Date | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|
| Total Coliform Bacteria | **System collects>40 samples**: 5% of monthly samples are positive **System collects<40 samples**: 1 positive monthly sample | 0 | Absent or Present | Absent | No | Various January 1 to December 31, 2003 unless otherwise noted. | Naturally present in the environment |

**Lead and Copper**

| Contaminant | MCL | MCLG | CCR Units | Level Detected/ Range | Violation Yes or No | Sample Date | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|
| Copper | 1.3 | 1.3 | ppm | 2.6 (.02-2.6) | No | Oct 03 | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |
| Lead | 15 | 0 | ppb | 9.3 (.5-9.3) | No | Oct 03 | Corrosion of household plumbing systems, erosion of natural deposits |

**Unregulated Organic Contaminants**

| Contaminant | MCL | MCLG | CCR Units | Level Detected/ Range | Violation Yes or No | Sample Date | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|
| Bromodichloromethane | N/A | N/A | ppb | 19.5 (15.0-19.5) | N/A | Apr/Jun/Sep /Nov 2003 | By-product of drinking water chlorination. |
| Chlorodibromomethane | N/A | N/A | ppb | 11.0 (4.25-11.0) | N/A | Apr/Jun/Sep /Nov 2003 | By-product of drinking water chlorination. |
| Chloroform | N/A | N/A | ppb | 61.8 (26.0-61.8) | N/A | Apr/Jun/Sep /Nov 2003 | By-product of drinking water chlorination. |

**Volatile Organic Contaminants**

| Contaminant | MCL | MCLG | CCR Units | Level Detected/ Range | Violation Yes or No | Sample Date | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|
| Haloacetic Acids 5 (HAA5) | 60 | N/A | ppb | 42.0 (0.5-42.0) | No | Apr/Jun/Sep /Nov 2003 | By-product of drinking water disinfection |
| Total Trihalomethanes | 80 | N/A | ppb | 87.5 (53.9-87.5) | No | Apr/Jun/Sep /Nov 2003 | By-product of drinking water disinfection |

**The Fort Carson contact for water quality information is the Water Program Manager at (719) 526-1730.**

# Colorado Springs Utilities (PWSID # CO0121150)
# 2003 Water Quality Report Information for
# Fort Carson Army Base (PWSID # CO0221445)

The report is designed to inform customers about the quality water and services delivered to them every day. Colorado Springs Utilities is committed to providing customers with a superior and reliable supply of high quality water. The drinking water continually meets or surpasses state and federal standards for drinking water.

## Vulnerable populations warning

Some people may be more vulnerable to contaminants in drinking water than the public in general. All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV-AIDS or other immune system disorders, some elderly and infants can be particularly at risk of infections. These people should seek advice about drinking water from their health care providers. For more information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Agency and the U.S. Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and microbiological contaminants, call the EPA Safe Drinking Water Hotline at 1-800-426-4791, or visit www.epa.gov/safewater/.

**Where does Colorado Springs water come from?**

Colorado Springs Utilities customers receive water blended from multiple sources; surface water, ground water, and purchased water. The water source may vary during the year. With no major source of water nearby, Colorado Springs Utilities relies on a raw water collection system that delivers water to Colorado Springs from nearly 200 miles away.

The headwaters, or sources, that supply these systems originate in wilderness areas near Aspen, Leadville and Breckenridge. Nearly 75 percent of our water originates from many mountain streams (surface water). Water from these streams is collected and stored in various reservoirs along the Continental Divide. The collection systems in this area consist of the Homestake, Fryingpan-Arkansas, Twin Lakes and Blue River systems. The majority of this water is transferred to Colorado Springs through pipelines that help to protect the water from contamination, such as, herbicides, pesticides, heavy metals and other chemicals. Water delivered to Colorado Springs is stored at Rampart Reservoir and at the Catamount reservoirs on Pikes Peak, which then supply the water treatment plants.

Colorado Springs Utilities also uses local surface and ground water sources. Local surface waters are from the north and south slopes of Pikes Peak, North and South Cheyenne Creeks, Fountain Creek, Monument Creek/Pikeview Reservoir and the Northfield Watershed. Local ground water sources are three Woodmen wells (900-975 feet deep) pumped from the Arapahoe aquifer and four Pinello Wells (46-52 feet deep) pumped from the Widefield aquifer.

Colorado Springs Utilities purchases treated surface water from the Fountain Valley Authority (PWSID # CO0121300). The Fountain Valley Authority receives water from the Fryingpan-Arkansas Project. The Fryingpan-Arkansas Project is a system of pipes and tunnels that collects water in the Hunter-Fryingpan Wilderness Area near Aspen. Waters collected from the system are diverted to the Arkansas River, near Buena Vista, and then flow some 150 miles downstream to Pueblo Reservoir. From Pueblo Reservoir, the water travels through a pipeline to the water treatment plant.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include: Microbial contaminants, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife. Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming. Pesticides and herbicides may come from a variety of sources, such as agriculture, urban stormwater runoff and residential uses. Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, may come from gas stations, urban stormwater runoff and septic systems. Radioactive contaminants that can be naturally occurring or be the result of oil and gas production and mining activities.

The Colorado Source Water Assessment and Protection program is a preventative approach to protecting public drinking water supplies. Source water assessment has four key components; public participation, delineation of source water protection areas, inventory of potential sources of contamination and rating the susceptibility of the source water to contamination. Source water assessments for Colorado were completed in 2003, and the Colorado Department of Public Health and Environment is in the final stages of preparing this information for release.

Springs Utilities has been involved in the Source Water Assessment and Protection program by collecting the necessary information to delineate all surface and groundwater drinking supplies, as well as, inventorying potential sources of contamination within these areas.

For updated information or to view the Colorado Source Water Assessment and Protection program plan, visit the CDPHE web site at www.cdphe.state.co.us/wq/sw/swaphom.html or call 303-692-3500.

To learn more about source water quality and watershed protection, visit the following United States Geological Survey and Environmental Protection Agency Web sites: http://co.water.usgs.gov and www.epa.gov/owow/watershed/.

**What is in Colorado Springs water?**
In order to ensure that tap water is safe to drink, EPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health. The table contains many terms and abbreviations that may be unfamiliar. To help better understand these terms, the following definitions are provided:

***AL—Action Level:*** The concentration of a contaminant, if exceeded, triggers treatment or other requirements a water system must follow.
***MCL -- Maximum Contaminant Level:*** The "maximum allowed" is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
***MCLG -- Maximum Contaminant Level Goal:*** The "goal" is the level of a contaminant in drinking water, below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
***MRDL -- Maximum Residual Disinfectant Level:*** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
***MRDLG -- Maximum Residual Disinfectant Level Goal:*** The level of a drinking water disinfectant, below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
***N/A -- Not Applicable***
***NTU -- Nephelometric Turbidity Unit:*** Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of five NTUs is just noticeable to the average person.
***ND-- Non-Detects or BDL -- Below Detection Level:*** Laboratory analysis indicates that the constituent is not present. ("<" Symbol for less than, the same as ND or BDL).
***Ug/L -- Parts per billion ppb or Micrograms per liter:*** One part per billion corresponds to one minute in 2,000 years or one penny in 10,000,000. Parts per million (ppm) or ***Milligrams per liter (mg/L):*** One part per million corresponds to one minute in two years or one penny in $10,000.
***pCi/L -- PicoCuries per Liter:*** A measure of radioactivity in water.
***TT -- Treatment Technique:*** A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
***Waiver:*** State permission not to test for a specific contaminant. The state has issued Springs Utilities waivers for asbestos, cyanide, dioxin, glyphosate, nitrite, and all unregulated inorganic contaminants.

**Additional information about nitrate**
Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If a person is caring for an infant, and detected nitrate levels are above 5 ppm, ask advice from a health care provider.

**Additional Information about Radon**
In 2003, the Pinello Wells' radon levels were 420 - 830 pCi/L. The Woodmen Wells also contain radon, but it has not been tested since the new plant, which has aeration for radon removal, went in service in July 2003. Radon is a radioactive gas that you cannot see, taste or smell. It is found in the soil throughout the United States. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can reach high levels in all types of homes. Radon can also be released from tap water from showering, washing dishes and other household activities. Compared to radon entering the home through the soil, radon entering the home through tap water will be, in most cases, a small source of radon in the indoor air.

Radon is a known human carcinogen. Breathing air that contains radon can lead to lung cancer. Drinking water that contains radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. Fix the home if the level of radon in the air is 4 picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that are relatively inexpensive. For additional information, call the state radon program at 303- 692-3030 or call the EPA Radon Hotline 1-800-SOS-RADON or visit www.epa.gov/iaq/radon/.

The state requires Colorado Springs Utilities to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. Some of the data, though representative, may be more than one year old. The table below lists the regulated and unregulated contaminants that were found.

**This table shows the combined results of monitoring for all seven plants for the period of January 1 through December 31, 2003, Unless Otherwise Noted.**

| Contaminant | MCL | MCLG | CCR Unit | Level Detected (Range) | Violation Yes or No | Sample Date | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|
| **Microbiological Contaminants** | | | | | | | |
| Total Organic Carbon | TT | N/A | N/A | N/A† | No | Running Annual Average | Naturally present in the environment |
| † The Disinfectants and Disinfection Byproducts Rule provides several alternative compliance criteria besides the TOC removal ratios. We did not report TOC removal ratios because we met an alternative compliance criteria. The alternative compliance criteria that we use is §141.135 (a)(2)(ii). Our treated water TOC levels are <2.0 ppm calculated quarterly as a running annual average. | | | | | | | |
| Turbidity | TT = 1 NTU | | | 1 | | | |
| Lowest Monthly Percent of readings above the TT limits | TT = 95% of samples <0.3 NTU | N/A | NTU | 100% | No | Jan-Dec 2003 | Soil runoff. |
| (Turbidity is a measure of the cloudiness of the water. We monitor turbidity because it is a good indicator of the effectiveness of our filtration system.) | | | | | | | |
| **Radionuclides** | | | | | | | |
| Beta/photon emitters | Trigger level = 50 | 0 | PCi/L | 4.44 (ND-4.44) | No | Sep 2001 and May 2003 | Decay of natural and man-made deposits |
| **Inorganic Contaminants** | | | | | | | |
| Arsenic | 10* | 0* | Ppb | 4.0 (ND-4.0) | No | Jun-Aug 2003 | Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes |
| * Effective January 23, 2006. Unit then the MCL is 0.05mg/L (50 ppb) and there is no MCLG. | | | | | | | |
| Barium | 2 | 2 | ppm | 0.0867 (0.0095-0.0867) | No | Jul-Aug 2003 | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits |
| Chromium | 100 | 100 | ppb | 1.3 (ND-1.3) | No | Jul & Aug 2003 | Discharge from steel and pulp mills; erosion of natural deposits |
| Fluoride | 4 | 4 | ppm | 1.76 (0.14-1.76) | No | May, Jul & Aug 2003 | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories |
| Nitrate (as Nitrogen) | 10 | 10 | ppm | 6.62 (ND-6.62) | No | Jan, Apr, May, Jul, Aug & Oct 2003 | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |
| Selenium | 50 | 50 | ppb | 2.9 (ND-2.9) | No | May, Jul & Aug 2003 | Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines |
| **Unregulated Inorganic Contaminants** | | | | | | | |
| Sodium | N/A | N/A | ppm | 44.7 (6.3-44.7) | N/A | Jun, Jul & Aug 2003 | Erosion of natural deposits |
| Sulfate | N/A | N/A | ppm | 102 (7.0-102) | N/A | Jul 2000 | Erosion of natural deposits |

Cryptosporidium is a microbial pathogen found in surface water throughout the United States. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. Colorado Springs Utilities

monitoring indicates the presence of these organisms in source water that goes into the water treatment plant; however, no organisms were detected in the drinking water from the water treatment plant. Current test methods do not allow determining if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. It is encouraged that immuno-compromised individuals consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water. For more information on Cryptosporidium visit www.epa.gov/ogwdw000/crypto.html.

**Reporting requirements not met**
During 2003, Colorado Springs Utilities received one minor violation. Colorado Springs Utilities is required to monitor drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not the drinking water meets health standards. The water system failed to submit a report on time during the past year. Even though this is not an emergency, customers have a right to know what happened and what Colorado Springs Utilities did to correct this situation.

**What should people do?**
There is nothing needed at this time. The 2003 third quarter Maximum Residual Disinfection Level report for chlorine was submitted late to the Colorado Department of Public Health and Environment. During the third quarter, free chlorine residuals were monitored in the distribution system as required. Colorado Springs Utilities was required to take 540 samples during the quarter and took 965 samples during the quarter. The chlorine levels were all within an acceptable range (0.10 to 1.1 mg/L).

**What happened? What is being done?**
The report was due October 10, but it was not sent until October 28. Colorado Springs Utilities recognizes the importance of the report being received at the Colorado Department of Public Health and Environment by the October 10 and has made the appropriate corrective actions, which include training of staff and improvements in reporting procedure. For more information, please contact Colorado Springs Utilities at 448-4800 or at 111 S. Cascade Ave., Colorado Springs, CO 80903 or at askus@csu.org.

For more Water Quality information or questions about this report, call Laboratory Services at 719-668-4560. Visit our web site at www.csu.org.